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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,680	11/09/2001	Yoon San Park	0630-1356P	5799

2292 7590 10/19/2004

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EXAMINER
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SANTIAGO, MARICELI

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/986,680

Applicant(s)

PARK, YOON SAN

Examiner

Mariceli Santiago

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1 and 3-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-10 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 9, 2004 has been entered.

### ***Response to Amendment***

The Amendment, filed on August 9, 2004, has been entered and acknowledged by the Examiner.

Cancellation of claim 2 has been entered.

Claims 1 and 3-10 are pending in the instant application.

### ***Specification***

The abstract of the disclosure is objected to because it should contain a single paragraph. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an

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application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 3-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Takayanagi (US 6,188,169).

Regarding claim 1, Takayanagi discloses a supporting frame structure for a tension-type shadow mask (Figs. 1A-1C) of a color CRT comprising first and second main frames (45 and 46), each having a portion for supporting a shadow mask, first and second sub frames (47 and 48) combined with the main frames for applying elastic force to the shadow mask, wherein a curvature of each one of the portions for supporting satisfies the equation  $\Delta R/R = 0.95-1.05$ , before the first and second main frames are compressed for supporting the shadow mask (Figs. 1C and 2A, Column 3, lines 16-25, constant radius R along the main frames), where R is a radius of curvature obtained by connecting a center and both ends of each one of the portions for supporting, and  $\Delta R$  is a radius of curvature obtained by connecting three arbitrary positions of each one of the portions for supporting.

Regarding claim 3, Takayanagi discloses a structure wherein one or more damper wires (43) of which respective ends are fixed to the first and second sub frames are attached to the shadow mask.

Regarding claim 4, Takayanagi discloses a frame for supporting a tension-type shadow mask (Figs. 1A-1C) of a color CRT comprising a pair of first frames (45 and 46), each having a portion for supporting a shadow mask, respectively, a pair of second frames (47 and 48) combined with the first frames for applying elastic force to the shadow mask, wherein the portions for supporting in the first frames have a single radius of curvature before the first frames are compressed (Figs. 1C and 2A, Column 3, lines 16-25, constant radius R along the first frames), for applying an elastic force to the shadow mask and supporting the shadow mask.

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Regarding claim 5, Takayanagi discloses a frame wherein the radius of curvature of the portions for supporting satisfies the equation  $\Delta R/R = 0.95-1.05$  (Figs. 1C and 2A, Column 3, lines 16-25, constant radius R along the main frames), where R is a radius of curvature obtained by connecting a center and both ends of each one of the portions for supporting in the first frames, and  $\Delta R$  is a radius of curvature obtained by connecting three arbitrary positions of each one of the portions for supporting in the first frames.

Regarding claims 6 and 7, Takayanagi discloses a structure wherein one or more damper wires (43) of which respective ends are fixed to the second frames are attached to the shadow mask.

### ***Response to Arguments***

Applicant's arguments filed August 9, 2004 have been fully considered but they are not persuasive.

In regards to the rejection of claims 1 and 3-7, Applicant argues that the radius R disclosed by Takayanagi has nothing to do with a radius of curvature of the supporting surfaces of the main frames as claimed, Applicant refers to Fig. 3A of Takayanagi as showing a non-constant radius of curvature. The Examiner respectfully disagrees, Takayanagi discloses in the Background of the Invention, see Columns 2 and 3, that the "surfaces 45a and 46a of upper and lower frames 45 and 46 of aperture grill supporting frame 42, through which the aperture grill 41 is welded to the supporting frame, have been so processed as to give a part of a columnar wall surface with a radius of R", furthermore, "because these welded surfaces 45a and 46a with a form correspondent with a part of a columnar wall surface with a radius of R as described earlier are assembled as initially designed, the welded surfaces 45a and 46a being subject to elastic deformations do not actually give that designed form". Accordingly, it is the

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Examiner's position that the radius R disclosed by Takayanagi is related to the radius of curvature, i.e., the surface's radius of the main frames, this being of a constant uniform value prior to the assembly of the shadow mask.

***Allowable Subject Matter***

Claims 8-10 are allowed over the prior art of record.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 8, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 8, and specifically comprising the limitation of each of the portions for supporting in the first frames has inflection points where the curvature of the portions for supporting is increased at peripheral portions thereof after the first frames are compressed, for supporting the shadow mask and increasing a friction force of a damper wire at the periphery of the shadow mask.

Regarding claims 9 and 10, claims 9 and 10 are allowable for the reasons given in claim 8 because of their dependency status from claim 8.

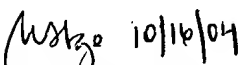
***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (571) 272-2464. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mariceli Santiago  
Patent Examiner  
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